

Remarks

Claims 1-15 are pending. Claims 3-15 are withdrawn pursuant to a restriction requirement. Applicants eliminated a transcription error from the preamble in claim 1. The amendment clarifies the intended subject matter and is primarily a matter of form. No new matter has been added.

The proposed amendment does not introduce a new patentable feature. Rather, the amendment is simply meant to eliminate a redundant phrase mistakenly introduced during prosecution. The amendment addresses the only pending rejection and places the case in condition for allowance. For all of the above reasons, Applicants submit that good cause exists to enter the amendment even though presented after final rejection.

The Examiner rejects claims 1 and 2 under 35 U.S.C. 112(2) as being indefinite for failing to particularly point out and distinctly claim the intended subject matter. The Examiner objected to the form of the preamble as being ambiguous. The amendment set forth above addresses this objection and places this case in condition for allowance.

Claim 4 is drawn to a non-elected species. Claim 1 is a generic claim and now believed to be in condition for allowance. Applicants request that claim 4 be rejoined with the remaining species claims of Group I. Claims 5-8, 11 and 14 are drawn to processes for making the patentable compounds. To the extent that the compounds are patentable, a process for making such compounds must also be patentable. Applicants further request that the process claims of Groups II, V and VIII be rejoined with Group I. Rejoining the groups will be in the best interests of all parties by reducing the number of future applications.

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T-704 P.08/14 F-523

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Applicants submit that the instant application is now in condition for allowance. In the event that minor amendments will further prosecution, Applicants request that the Examiner contact the undersigned representative.

Respectfully submitted,



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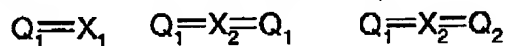
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Amended Claims with underlining and bracketing

1. (Twice Amended) A compound of the formula ~~A compound of the formula~~ (Ia), (Ib) or (Ic)



(Ia)

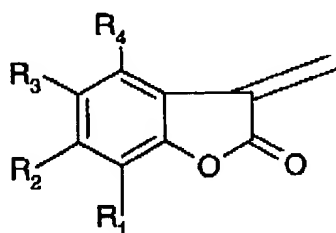
(Ib)

(Ic)

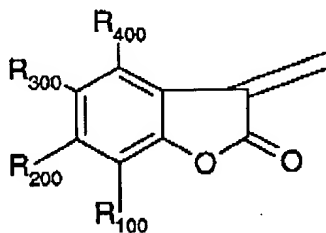
in which

$Q_1$  is a benzofuran-2-one of the formula (IIa), and

$Q_2$  is a benzofuran-2-one of the formula (IIb)



(IIa)



(IIb)

in which

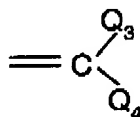
$R_1$ ,  $R_2$ ,  $R_3$ ,  $R_4$ ,  $R_{100}$ ,  $R_{200}$ ,  $R_{300}$  or  $R_{400}$  independently of one another are hydrogen, halogen, hydroxyl, cyano, ether, nitro, an amine, amide, imine, urethane, sulfonamide, ester, carboxylic acid or sulfonic acid radical or carboxylic salt, sulfonic salt or  $C_1$ - $C_{24}$ alkyl,  $C_1$ - $C_{24}$ alkoxy,  $C_1$ - $C_{24}$ alkylthio,  $C_5$ - $C_{12}$ cycloalkyl,  $C_5$ - $C_{12}$ cycloalkoxy,  $C_5$ - $C_{12}$ cycloalkylthio,  $C_2$ - $C_{24}$ alkenyl,  $C_6$ - $C_{24}$ aryl,  $C_7$ - $C_{25}$ aralkyl,  $C_6$ - $C_{24}$ aryloxy,  $C_6$ - $C_{24}$ arylthio, thienyl, benzo[b]thienyl, dibenzo[b,d]thienyl, thianthrenyl, furyl, furfuryl, 2H-pyran, benzofuranyl, isobenzofuranyl, benzimidazolyl, benzothiazolyl, dibenzofuranyl, phenoxythiyl, pyrrolyl, imidazolyl, pyrazolyl, pyridyl, bipyridyl, triazinyl, pyrimidinyl, pyrazinyl, pyridazinyl, indolizynyl, isoindolyl, indolyl, indazolyl, purinyl, quinolizynyl, quinolyl, isoquinolyl, phthalazinyl, naphthyridinyl, quinoxalinyl, quinazolinyl, cinnolynyl, pteridinyl, carbazolyl, carbolinyl, benzotriazolyl, benzoxazolyl, phenanthridinyl, acridinyl, perimidinyl, phenanthrolinyl, phenazinyl, isothiazolyl, phenothiazinyl, isoxazolyl, furazanyl or phenoxazinyl, O-thienyl, O-benzo[b]thienyl, O-dibenzo[b,d]thienyl, O-thianthrenyl, O-furyl, O-furfuryl, O-2H-pyran, O-benzofuranyl, O-isobenzofuranyl, O-benzimidazolyl, O-benzothiazolyl, O-dibenzofuranyl, O-phenoxythiyl, O-pyrrolyl, O-imidazolyl, O-pyrazolyl, O-pyridyl, O-bipyridyl, O-triazinyl, O-pyrimidinyl, O-pyrazinyl, O-pyridazinyl, O-indolizynyl, O-isoindolyl, O-indolyl, O-indazolyl, O-purinyl, O-quinolizynyl, O-quinolyl, O-isoquinolyl, O-phthalazinyl, O-naphthyridinyl, O-quinoxalinyl, O-quinazolinyl, O-cinnolynyl, O-pteridinyl, O-carbazolyl, O-carbolinyl, O-benzotriazolyl, O-benzoxazolyl, O-phenanthridinyl, O-acridinyl, O-perimidinyl, O-phenanthrolinyl, O-phenazinyl, O-isothiazolyl, O-phenothiazinyl, O-isoxazolyl, O-furazanyl or O-

ph noxaziny, S-thi nyl, S-benzo[b]thienyl, S-dib nzo[b,d]thienyl, S-thianthrenyl, S-furyl, S-furfuryl, S-2H-pyranyl, S-benzofuranyl, S-isobenzofuranyl, S-benzimidazolyl, S-benzothiazolyl, S-dibenzofuranyl, S-phenoxythiiny, S-pyrrolyl, S-imidazolyl, S-pyrazolyl, S-pyridyl, S-bipyridyl, S-triazinyl, S-pyrimidinyl, S-pyrazinyl, S-pyridazinyl, S-indoliziny, S-isoidolyl, S-indolyl, S-indazolyl, S-puriny, S-quinoliziny, S-quinolyl, S-isoquinolyl, S-phthalazinyl, S-naphthyridiny, S-quinoxaliny, S-quinazoliny, S-cinnoliny, S-pteridinyl, S-carbazolyl, S-carboliny, S-benzotriazolyl, S-benzoxazolyl, S-phenanthridiny, S-acridiny, S-perimidiny, S-phenanthroliny, S-phenaziny, S-isothiazolyl, S-phenothiaziny, S-isoxazolyl, S-furazanyl or S-phenoxaziny,

or

$R_1$  and  $R_2$ ,  $R_2$  and  $R_3$ ,  $R_3$  and  $R_4$  or  $R_{100}$  and  $R_{200}$ , or  $R_{200}$  and  $R_{300}$ ,  $R_{300}$  and  $R_{400}$ , independently of one another in each case together are divalent radicals, such as polycyclic radicals or 1,3-butadien-1,4-ylene or  $-\text{CH}=\text{CH}-\text{NH}-$ , the two last radicals forming an additional fused-on 5- or 6-membered ring, and

$X_1$  is a hydrazone or imine radical, with the proviso that, if  $R_1$ ,  $R_2$ ,  $R_3$  and  $R_4$  are hydrogen, or at least one  $R_1$ ,  $R_2$ ,  $R_3$  or  $R_4$  is methyl, the hydrazone radical is excluded, or, if  $R_1$ ,  $R_2$ ,  $R_3$  or  $R_4$  is hydrogen,  $X_1$  is not phenylimine- or 4-dimethylamine-phenylimine, or  $X_1$  is a methylene radical,



in which

$Q_3$  is a primary or secondary amine radical and  $Q_4$  is hydrogen or  $C_1-C_{24}$ alkyl,  $-\text{CO}-(C_1-C_{24}\text{alkyl})$ ,  $-\text{CO}-O-(C_1-C_{24}\text{alkyl})$ ,  $C_1-C_{24}$ alkoxy,  $C_1-C_{24}$ alkylthio,  $C_5-C_{12}$ cycloalkyl,  $C_5-C_{12}$ cycloalkoxy,  $C_5-C_{12}$ cycloalkylthio,  $C_2-C_{24}$ alkenyl,  $C_6-C_{24}$ aryl,  $-\text{CO}-O-(C_6-C_{24}\text{aryl})$ ,  $-\text{CO}-(C_6-C_{24}\text{aryl})$ ,  $C_6-C_{24}$ aryloxy, a primary or secondary amine radical,  $C_6-C_{12}$ arylthio,  $C_7-C_{25}$ aralkyl, thienyl, benzo[b]thienyl, dibenzo[b,d]thienyl, thianthrenyl, furyl, furfuryl, 2H-pyranyl, benzofuranyl, isobenzofuranyl, benzimidazolyl, benzothiazolyl, dibenzofuranyl, phenoxythiiny, pyrrolyl, imidazolyl, pyrazolyl, pyridyl, bipyridyl, triazinyl, pyrimidinyl, pyrazinyl, pyridazinyl, indoliziny, isoidolyl, indolyl, indazolyl, puriny, quinoliziny, quinolyl, isoquinolyl, phthalazinyl, naphthyridiny, quinoxaliny, quinazoliny, cinnoliny, pteridinyl, carbazolyl, carboliny, benzotriazolyl, benzoxazolyl, phenanthridiny, acridiny, perimidiny, phenanthroliny, phenaziny, isothiazolyl, phenothiaziny, isoxazolyl, furazanyl or phenoxaziny O-thienyl, O-benzo[b]thienyl, O-dibenzo[b,d]thienyl, O-thianthrenyl, O-furyl, O-furfuryl, O-2H-pyranyl, O-benzofuranyl, O-isobenzofuranyl, O-benzimidazolyl, O-benzothiazolyl, O-dibenzofuranyl, O-

phen xythiynyl, O-pyrrolyl, O-imidazolyl, O-pyrazolyl, O-pyridyl, O-bipyridyl, O-triazinyl, O-pyrimidinyl, O-pyrazinyl, O-pyridazinyl, O-indolizynyl, O-isindolyl, O-indolyl, O-indazolyl, O-purynyl, O-quinolizynyl, O-quinolyl, O-isoquinolyl, O-phthalazinyl, O-naphthyridinyl, O-quinoxalynyl, O-quinazolynyl, O-cinnolynyl, O-pteridinyl, O-carbazolyl, O-carbolynyl, O-benzotriazolyl, O-benzoxazolyl, O-phenanthridinyl, O-acridinyl, O-perimidinyl, O-phenanthrolinyl, O-phenazinyl, O-isothiazolyl, O-phenothiazinyl, O-isoxazolyl, O-furazanyl or O-phenoxazinyl S-thienyl, S-benzo[b]thienyl, S-dibenzo[b,d]thienyl, S-thianthrenyl, S-furyl, S-furfuryl, S-2H-pyranyl, S-benzofuranyl, S-isobenzofuranyl, S-benzimidazolyl, S-benzothiazolyl, S-dibenzofuranyl, S-phenoxythiynyl, S-pyrrolyl, S-imidazolyl, S-pyrazolyl, S-pyridyl, S-bipyridyl, S-triazinyl, S-pyrimidinyl, S-pyrazinyl, S-pyridazinyl, S-indolizynyl, S-isindolyl, S-indolyl, S-indazolyl, S-purynyl, S-quinolizynyl, S-quinolyl, S-isoquinolyl, S-phthalazinyl, S-naphthyridinyl, S-quinoxalynyl, S-quinazolynyl, S-cinnolynyl, S-pteridinyl, S-carbazolyl, S-carbolynyl, S-benzotriazolyl, S-benzoxazolyl, S-phenanthridinyl, S-acridinyl, S-perimidinyl, S-phenanthrolinyl, S-phenazinyl, S-isothiazolyl, S-phenothiazinyl, S-isoxazolyl, S-furazanyl or S-phenoxazinyl,

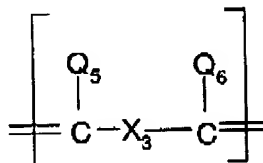
or

$Q_3$  and  $Q_4$  together are a lactam, quinomethylene, hydantoin, acenaphthenequinone, azlactone, pyrazolonyl, barbituric acid, isoindolinone or isoindoline radical, with the proviso that

$Q_4$  is not hydrogen and  $Q_3$  is not a primary or secondary amine radical if  $R_3$  is hydrogen, methoxy or hydroxyl and  $R_1$ ,  $R_2$  and  $R_4$  are hydrogen,

and

$X_2$  is thienyl, furyl, 2H-pyranyl, pyrrolyl, imidazolyl, pyrazolyl, pyridyl, triazinyl, pyrazinyl, pyridazinyl, morpholin, piperidyl, piperazinyl, or is



in which

$X_3$  is a single bond,  $C_6$ - $C_{24}$ arylene, thienylene, benzo[b]thienylene, dibenzo[b,d]thienylene, thianthrenylene, furylene, furfurylene, 2H-pyranylene, benzofuranylene, isobenzofuranylene, dibenzofuranylene, phenoxythienylene, pyrrolylene, imidazolylene, pyrazolylene, pyridylene, bipyridylene, benzimidazolylene, benzothiazolylene, triazinylene, pyrimidinylene, pyrazinylene, pyridazinylene, indolizinylenylene, isindolylene, indolylene, indazolylene, purinylenylene, quinolizinylenylene, quinolylenylene, isoquinolylenylene, phthalazinylene, naphthyridinylenylene, quinoxalinylenylene, quinazolinylenylene, cinnolinylenylene,

pteridinylene, carbazolyl ne, carbolinylene, benzotriazolylen , benzoxazolylen , phenanthridinylene, acridinylene, perimidinylene, phenanthrolinylene, phenazinylene, isothiazolytene, phenothiazinylene, isoxazolytene, furazanylene or phenoxazinylene 1,2-phenylene, 1,3-phenylene, 1,4-phenylene or naphthylene, or a tetravalent polyether, polyimine, polyamine radical, or bi(C<sub>6</sub>-C<sub>24</sub>)arylene, bipyridylene, bipyrrolylen, piperazinedionylene, quinodimethylene, imidazolonylen, isoindolinylen, and anthraquinoylfuranoylen, C<sub>2</sub>-C<sub>24</sub>alkenylene, in which bi(C<sub>6</sub>-C<sub>24</sub>)arylene, bipyridylene, bipyrrolylen, piperazinedionylene, quinodimethylene, imidazolonylen, isoindolinylen, and anthraquinoylfuranoylen or C<sub>2</sub>-C<sub>24</sub>alkenylene are optionally interrupted by one or more intermediate units selected from the group consisting of -CH=CH-, -CH=N-, -N=N-, -CR<sub>44</sub>R<sub>42</sub>-, -CO-, -COO-, -OCO-, -NR<sub>42</sub>CO-, -CONR<sub>42</sub>-, -O-, -S-, -SO-, -SO<sub>2</sub>- or -NR<sub>42</sub>-,

in which

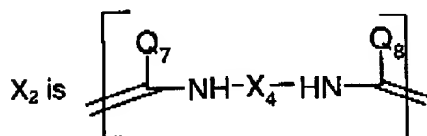
R<sub>42</sub> and R<sub>44</sub> independently of one another are hydrogen, C<sub>1</sub>-C<sub>24</sub>alkyl, C<sub>5</sub>-C<sub>12</sub>cycloalkyl, C<sub>2</sub>-C<sub>24</sub>alkenyl, C<sub>6</sub>-C<sub>24</sub>aryl, C<sub>7</sub>-C<sub>25</sub>aralkyl or thienyl, benzo[b]thienyl, dibenzo[b,d]thienyl, thianthrenyl, furyl, furfuryl, 2H-pyranyl, benzofuranyl, isobenzofuranyl, benzimidazolyl, benzothiazolyl, dibenzofuranyl, phenoxythiiny, pyrrolyl, imidazolyl, pyrazolyl, pyridyl, bipyridyl, triazinyl, pyrimidinyl, pyrazinyl, pyridazinyl, indoliziny, isoindolyl, indolyl, indazolyl, purinyl, quinoliziny, quinolyl, isoquinolyl, phthalazinyl, naphthyridinyl, quinoxaliny, quinazoliny, cinnoliny, pteridiny, carbazolyl, carboliny, benzotriazolyl, benzoxazolyl, phenanthridiny, acridiny, perimidiny, phenanthroliny, phenaziny, isothiazolyl, phenothiaziny, isoxazolyl, furazanyl or phenoxaziny,

with the proviso that if R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub>, R<sub>100</sub>, R<sub>200</sub>, R<sub>300</sub>, R<sub>400</sub> are all tert-butyl or all hydrogen, Q<sub>5</sub> and Q<sub>6</sub> are hydrogen, X<sub>3</sub> is not 1,4-phenylene, and

Q<sub>5</sub> and Q<sub>6</sub> independently of one another are hydrogen, C<sub>6</sub>-C<sub>24</sub>aryl, C<sub>6</sub>-C<sub>24</sub>aryloxy, C<sub>1</sub>-C<sub>24</sub>alkyl, C<sub>1</sub>-C<sub>24</sub>alkoxy, C<sub>1</sub>-C<sub>24</sub>alkylthio, C<sub>5</sub>-C<sub>12</sub>cycloalkyl, C<sub>5</sub>-C<sub>12</sub>cycloalkoxy, C<sub>5</sub>-C<sub>12</sub>cycloalkylthio, C<sub>2</sub>-C<sub>24</sub>alkenyl, C<sub>6</sub>-C<sub>24</sub>aryl, C<sub>6</sub>-C<sub>24</sub>aryloxy, C<sub>6</sub>-C<sub>24</sub>arylthio, thienyl, benzo[b]thienyl, dibenzo[b,d]thienyl, thianthrenyl, furyl, furfuryl, 2H-pyranyl, benzofuranyl, isobenzofuranyl, benzimidazolyl, benzothiazolyl, dibenzofuranyl, phenoxythiiny, pyrrolyl, imidazolyl, pyrazolyl, pyridyl, bipyridyl, triazinyl, pyrimidinyl, pyrazinyl, pyridazinyl, indoliziny, isoindolyl, indolyl, indazolyl, purinyl, quinoliziny, quinolyl, isoquinolyl, phthalazinyl, naphthyridinyl, quinoxaliny, quinazoliny, cinnoliny, pteridiny, carbazolyl, carboliny, benzotriazolyl, benzoxazolyl, phenanthridiny, acridiny, perimidiny, phenanthroliny, phenaziny, isothiazolyl, phenothiaziny, isoxazolyl, furazanyl or phenoxaziny O-thienyl, O-benzo[b]thienyl, O-dibenzo[b,d]thienyl, O-thianthrenyl, O-furyl, O-furfuryl, O-2H-pyranyl, O-benzofuranyl, O-isobenzofuranyl, O-benzimidazolyl, O-benzothiazolyl, O-dibenzofuranyl, O-phenoxythiiny, O-pyrrolyl, O-imidazolyl, O-pyrazolyl, O-pyridyl, O-bipyridyl, O-triazinyl, O-pyrimidinyl, O-pyrazinyl, O-pyridazinyl, O-indoliziny, O-isoindolyl, O-indolyl, O-indazolyl, O-purinyl, O-quinoliziny, O-quinolyl, O-isoquinolyl,

O-phthalazinyl, O-naphthyridinyl, O-quinoxaliny, O-quinazolinyl, O-cinnolinyl, O-pteridiny, O-carbazolyl, O-carbolinyl, O-benzotriazolyl, O-benzoxazolyl, O-phenanthridinyl, O-acridinyl, O-perimidinyl, O-phenanthrolinyl, O-ph nazinyl, O-isothiazolyl, O-phenothiazinyl, O-isoxazolyl, O-furazanyl or O-phenoxazinyl S-thienyl, S-benzo[b]thienyl, S-dibenzo[b,d]thienyl, S-thianthrenyl, S-furyl, S-furfuryl, S-2H-pyranyl, S-benzofuranyl, S-isobenzofuranyl, S-benzimidazolyl, S-benzothiazolyl, S-dibenzofuranyl, S-phenoxythiiny, S-pyrrolyl, S-imidazolyl, S-pyrazolyl, S-pyridyl, S-bipyridyl, S-triazinyl, S-pyrimidinyl, S-pyrazinyl, S-pyridazinyl, S-indoliziny, S-isoindolyl, S-indolyl, S-indazolyl, S-puriny, S-quinoliziny, S-quinolyl, S-isoquinolyl, S-phthalazinyl, S-naphthyridinyl, S-quinoxaliny, S-quinazolinyl, S-cinnolinyl, S-pteridiny, S-carbazolyl, S-carbolinyl, S-benzotriazolyl, S-benzoxazolyl, S-phenanthridinyl, S-acridinyl, S-perimidinyl, S-phenanthrolinyl, S-phenazinyl, S-isothiazolyl, S-phenothiazinyl, S-isoxazolyl, S-furazanyl or S-phenoxazinyl,

or



in which

$Q_7$  and  $Q_8$  independently of one another are  $Q_5$  or  $Q_6$ , and

$X_4$  is  $C_6$ - $C_{24}$ arylene,  $A_5$ - $A_{18}$ heteroarylene, a polymethyldene or divalent polyether, polyimine, polyamine radical, or bi( $C_6$ - $C_{24}$ )arylene, bipyridylene, bipyrrylylen, piperazinedionylene, quinodimethylene, imidazolonylen, isoindolinylen, and anthraquinoylfuranoylen  $C_2$ - $C_{24}$ alkenylene, in which bi( $C_6$ - $C_{24}$ )arylene, bipyridylene, bipyrrylylen, piperazinedionylene, quinodimethylene, imidazolonylen, isoindolinylen, and anthraquinoylfuranoylen or  $C_2$ - $C_{24}$ alkenylene are optionally interrupted by one or more intermediate units selected from the group consisting of -CH=CH-, -CH=N-, -N=N-, -CR<sub>44</sub>R<sub>42</sub>-, -CO-, -COO-, -OCO-, -NR<sub>42</sub>CO-, -CONR<sub>42</sub>-, -O-, -S-, -SO-, -SO<sub>2</sub>- or -NR<sub>42</sub>-,

or

